

SHIPPING WASTE FOR PERMANENT DISPOSAL

Fact:

All of the site's stored inventory of transuranic waste is now expected to be shipped to New Mexico by 2006, approximately 28 years ahead of the original schedule.

An important part of SRS' strategy for safely and cost-effectively managing wastes is the use of qualified off-site treatment and disposal facilities for wastes that are technically or economically unsuitable for on-site disposal. Since 2001, the site has been sending portions of its low-level radioactive waste to the Nevada Test Site (NTS) and Envirocare of Utah (EOU), mixed waste to EOU and transuranic waste to the Waste Isolation Pilot Plant (WIPP) in New Mexico.

Transuranic (TRU) Waste

The Waste Isolation Pilot Plant (WIPP) is the Department of Energy's facility for disposing of transuranic (TRU) waste from across the DOE Complex. SRS began shipping its TRU waste to WIPP in 2001, initially making about one shipment a month.

In 2003, SRS dramatically accelerated its TRU waste shipping schedule, and is now making 24 shipments per month, compared to eight shipments per month the previous year. A total of 185 shipments were made in FY03, a ten-fold increase over FY02.



SRS employees prepare a load of transuranic waste for shipment to the Waste Isolation Pilot Plant in New Mexico.

At this rate, the site expects to finish shipping the remaining 10,000 cubic meters of currently stored waste by 2006, compared to the original target date of 2034.

Transuranic waste consists of clothing, tools, rags, residues, debris and other items contaminated with small quantities of radioactive elements heavier than uranium - hence the term "transuranic." SRS TRU waste primarily includes items with trace amounts of plutonium.

Depleted Uranium

Efforts to ship depleted uranium (DU) metals and oxides off site and out of South Carolina met with significant success in 2003.

In early June, the last DU metals left M Area, the former reactor fuel manufacturing area, where they had been stored since those facilities shut down more than a decade ago. The 50-year-old buildings were emptied in preparation for demolition, leaving more than 2,600 metric tons of DU material in the area's warehouses.

All the material was shipped to Envirocare in Utah in 145 shipments for disposal.

Disposition of DU oxide (DUO) material is ongoing from F Area, where more than 36,000 drums of the material were stored. In summer 2003, a pilot project to ship one tenth of this material - 3,270 drums containing 1,815 metric tons of DU oxide - to Envirocare was completed successfully. DUO is also stored at other locations around SRS. Plans are under way to send the remaining 33,000 drums, an effort that will continue over the next few years.

DUO, a byproduct of F Area operations, is a powder-like, low-level radioactive material. It has been safely stored in 55-gallon drums, awaiting disposition.



Since 2001, SRS has been shipping certain portions of its low-level and mixed low-level wastes to facilities in Nevada, Utah and elsewhere for treatment and disposal.

Low Level Waste

In July 2001, SRS began shipping some of its low-level radioactive wastes (LLW) to DOE's Nevada Test Site (NTS) and to Envirocare of Utah (EOU). Initiation of this shipping program, which is expected to continue throughout accelerated cleanup and beyond, represented a major accomplishment in the cleanup of legacy waste materials at SRS.

In FY03, SRS shipped 336 cubic meters of LLW to NTS. This included environmental restoration waste, job control waste and natural uranium slugs.

In addition 360 cubic meters (including debris waste from the

Old Tritium Facility such as equipment, piping, ductwork, wood and plastic) was shipped to EOU. LLW shipments are expected to increase significantly over the next few years.

Mixed Low Level Waste

In 2001, SRS made its first ever shipments of mixed waste for treatment offsite, and continues to decrease the inventory of mixed waste using available Resource Conservation and Recovery Act-regulated treatment and disposal vendors.

In 2003, SRS shipped 15 cubic meters of Saltstone cement

waste to Materials and Energy Corporation for treatment. The treated waste is subsequently shipped to Envirocare of Utah for disposal.

Also in 2003, SRS made its first shipment of liquid waste, 20 cubic meters of zinc bromide solution, to Envirocare for stabilization and disposal. A campaign to treat lead and debris at Envirocare began in August of 2003, and 236 cubic meters of waste was shipped in August and September. This campaign will continue into 2004 and 2005.

WASTE MANAGEMENT

Fact:

Typical low-level waste consists of used protective clothing, rags, tools and equipment, used resins and residues, dirt, concrete, construction debris and scrap metal.

Safe, Cost-effective Disposal of the Site's Waste

SRS has set a goal for disposing all of the legacy low-level radioactive waste currently stored on site by the end of Fiscal Year 2006. By the end of FY03, the site had disposed of 88 percent of the stored legacy waste and was two years ahead of schedule. At the same time, the acceleration of Deactivation and Decommissioning (D&D) activities is resulting in increasing quantities of new low-level waste (LLW), which is being managed in a timely manner.

In recent years, SRS has been using engineered trenches to dispose of solid low-level radioactive waste with extremely low radioactive content. Approximately 65 percent of the waste that was originally stored in the existing Low Activity Waste Vault (LAWV) is a candidate for removal to the trenches. This approach, which reserves the more robust – but expensive – LAWVs for higher activity low-level waste, is expected to enable the vaults to



Low Activity Waste Vaults provide safe disposal for certain types of solid low-level waste.

have enough capacity to continue accepting waste until 2024. In FY03, 10,700 cubic meters had been moved from the LAWV to an engineered trench.

In 2001, SRS implemented a new method of disposal for equipment that is physically too large for vault disposal, but contaminated at high enough levels to require vault type isolation. This method, called

“components-in-grout,” is suitable for items such as empty tankers that had been used to transport radioactive waste. The item is placed on a one-foot thick grout base in a trench, filling any void space in and around the item with special formulation grout, and grouting around the item to completely fill the trench. In FY03, 1,000 cubic meters had been disposed using this method.